

20020430.qrp v02_n541.qrl.20020430

Date: Tue, 30 Apr 2002 19:03:06 EDT
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 2541

QRP-L Digest 2541

Topics covered in this issue include:

- 1) [125767] OT: Computer firewall
by David Heintzleman <pstrdave@kdsi.net>
- 2) [125768] Dayton Rooms available
by Hank Kohl K8DD <k8dd@arrl.net>
- 3) [125769] Re: Antenna help.
by Dave <wr3i@earthlink.net>
- 4) [125770] Need several OHR100A 40M manual pages
by KE4VM@cs.com
- 5) [125771] WTB: Looking for a DD-1 Oak Hills Digital Display
by KE4VM@cs.com
- 6) [125772] British receiving site shown on the TV program
by "Stuart Rohre" <rohre@arlut.utexas.edu>
- 7) [125773] Re: Computer firewall
by "Mike Yetsko" <myetsko@insydesw.com>
- 8) [125774] Re: Computer firewall
by brickle <brickle@pobox.com>
- 9) [125775] Re: Computer firewall
by "Robin Kidd" <robink@us.ibm.com>
- 10) [125776] OT: WWII Receiving
by Kenneth Hoglund <hoglund@wfu.edu>
- 11) [125777] 2n2-40 yahoo group
by Dave Pomeroy <dave@dpomeroy.com>
- 12) [125778] RE: Apology / WWII Radio Interception
by John R Kirby <n3aaz-qrp@juno.com>
- 13) [125779] OT: Computer Firewall
by "WI8W" <wi8w@arrl.net>
- 14) [125780] Re: 2n2-40 yahoo group
by John Wagner <john@wagner-usa.net>
- 15) [125781] Attention: April Spartan Sprint Participants
by Richard Fisher <ki6sn@yahoo.com>
- 16) [125782] Re: Antenna Impedance (was: RE: Mobile whips)
by "James R. Duffey" <jamesd1@flash.net>
- 17) [125783] Re: Antenna help.
by "James R. Duffey" <jamesd1@flash.net>
- 18) [125784] [OT] Is it really OT?
by George Gingell <k3tks@u1.abs.net>
- 19) [125785] Re: Computer firewall

- by "Robin Kidd" <robink@us.ibm.com>
- 20) [125786] [OT] PCB Cleaning & Aluminum Work
by George Gingell <k3tks@u1.abs.net>
- 21) [125787] QRPTTF first-timer
by "P.Ermisch" <ermisch@usa.net>
- 22) [125788] Re: QRPTTF first-timer
by "George, W5YR" <w5yr@att.net>
- 23) [125789] qrp manual
by "Hal" <kc0bdw2@hotmail.com>
- 24) [125790] Re: Apology / WWII Radio Interception
by "Francis Callahan" <colcal@srv.net>
- 25) [125791] RE: Apology
by Nick Kennedy <nkennedy@tcainternet.com>
- 26) [125792] Re: Apology
by W2AGN <w2agn@w2agn.net>
- 27) [125793] Re: 2n2-40 yahoo group
by "Jim Kortge, K8IQY" <jokortge@prodigy.net>
- 28) [125794] Re: [OT] PCB Cleaning & Aluminum Work
by "Leon Heller" <leon_heller@hotmail.com>
- 29) [125795] Re: OT Posts in General
by Bruce Muscolino <w6toy@erols.com>
- 30) [125796] NEQRP SSB NET Tuesday
by "Ronald A Pfeiffer" <Ronald_A_Pfeiffer@raytheon.com>
- 31) [125797] Michigan QRP Net tonight
by "Kwik, Ed " <ed.kwik@delphiauto.com>
- 32) [125798] General Post
by "W2WU" <w2wurjj@verizon.net>
- 33) [125799] Re: OT Posts in General
by "Mike Yetsko" <myetsko@insydesw.com>
- 34) [125800] Re: Antenna Impedance (was: RE: Mobile whips)
by Bill Coleman <aa4lr@arrl.net>
- 35) [125801] RE: Computer Firewall
by "Tracy Markham" <tracy@bytemark.com>
- 36) [125802] Re: General Post
by Bruce Muscolino <w6toy@erols.com>
- 37) [125803] Re: General Post
by "Mike Yetsko" <myetsko@insydesw.com>
- 38) [125804] Re: QRP To The Field 2002 de K50J
by Bruce Rattray <rattray@gpfn.sk.ca>
- 39) [125805] PSK31 band selection?
by "Ronald A Pfeiffer" <Ronald_A_Pfeiffer@raytheon.com>
- 40) [125806] Re: OT Posts in General
by tailfeathers@juno.com
- 41) [125807] Re: Computer Firewall
by tailfeathers@juno.com
- 42) [125808] Re: PSK31 band selection?
by "Bill Jones" <kd7s@psnw.com>
- 43) [125809] Re: [PSK31 band selection?]

by Rod Cercone <rod@n0rc.com>
44) [125810] Re: [PSK31 band selection?]
by Thomas Jennings <jennings@eznet.net>
45) [125811] Re: XMLResponse
by wa0goz@arrl.net
46) [125812] Re: PSK31 band selection?
by "Mike Yetko" <myetko@insydesw.com>
47) [125813] Re: XMLResponse
by "George, W5YR" <w5yr@att.net>
48) [125814]
by Dave Pomeroy <dave@dpomeroy.com>
49) [125815] [OT] Question on MP3 players
by "David Fuller" <djfulle@qwest.com>
50) [125816] Need volunteer to build BLT for Blind Amateur
by "Doug Hendricks" <ki6ds@dph.dpol.net>
51) [125817] Re: General Post
by Bruce Muscolino <w6toy@erols.com>
52) [125818] BLT Builder Found
by "Doug Hendricks" <ki6ds@dph.dpol.net>
53) [125819] Re: Need volunteer to build BLT for Blind Amateur
by John Wagner <john@wagner-usa.net>
54) [125820] Re: Need volunteer to build BLT for Blind Amateur
by "Robin Kidd" <robink@us.ibm.com>
55) [125821] CW HF in your pocket! A Handie Codie.
by Jim Cluett <w1pid@yahoo.com>
56) [125822] free antenna to a good home
by "Tony Parks" <robert.parks11@gte.net>
57) [125823] RE:DK1HE SMD 40 Kit
by DL2FI@t-online.de (Peter Zenker)
58) [125824] Re: OT Posts in General
by W2AGN <w2agn@w2agn.net>
59) [125825] Re: OT: WWII Receiving
by baltimoremd@baltimoremd.com
60) [125826] CQ Southwest Florida
by Paul Womble <pwomble1@tampabay.rr.com>
61) [125827] Re: Apology / WWII Radio Interception
by "ZOOM" <kandrparker@sympatico.ca>
62) [125828] Re: [OT] Question on MP3 players
by Dave <wr3i@earthlink.net>
63) [125829] RE: Antenna Impedance (was: RE: Mobile whips)
by "Marty N5NW" <n5nw@n5nw.org>
64) [125830] Re: Biasing MOSFETS?
by na5n@zianet.com
65) [125831] Computers in Ham Radio
by wkhibbert@juno.com

Date: Mon, 29 Apr 2002 18:11:06 -0500
From: David Heintzleman <pstrdave@kdsi.net>
To: qrp-l@Lehigh.EDU
Subject: [125767] OT: Computer firewall
Message-ID: <3CCDD30A.327353B3@kdsi.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I'm thinking of getting a high speed cable connection for internet - can
always be on without tieing up phone line
- what you recommend as firewall?
Dave K8BBM

Date: Mon, 29 Apr 2002 19:11:35 -0400
From: Hank Kohl K8DD <k8dd@arrl.net>
To: qrp-l@lehigh.edu
Subject: [125768] Dayton Rooms available
Message-ID: <5.1.0.14.2.20020429191003.02a21d70@mail.arenet.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

We have had a couple cancellations.
So if anyone is looking for a room for the Dayton Hamvention at the Ramada
(QRP) Inn let me know.
73 Hank K8DD

Please reply to: QRP_Dayton at hotmail.com

Date: Mon, 29 Apr 2002 19:13:36 -0400
From: Dave <wr3i@earthlink.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [125769] Re: Antenna help.
Message-ID: <GDEDQPXTXV52PORONJMI961ZMLMITOR.3ccdd3a0@sony>
MIME-Version: 1.0
Content-Type: text/plain; charset="iso-8859-1"

sorry to tack on to Johns mail but I missed original posting:
Bill,

My choice for a Forty meter antenna using a 68foot tower would be A wire four

square with one elevated radial on each element this would give you about 6-8 db gain and the ability to direct antenna in one of four directions (good for protection from BC interference). If you don't have the ground area to do this then for sure I would put up the diamond making sure it is square for best gain and capture area. You can feed it at one of the side corners for vertical polarisation or the bottom corner for horizontal. Just my thoughts

Dave

WR3I

4/29/2002 6:06:48 PM, W2AGN <w2agn@w2agn.net> wrote:

>On Monday 29 April 2002 17:35, Bill Coleman wrote:

>> On 4/11/02 8:30 PM, Arthur Moe at kb7ww@easystreet.com wrote:

>> >I would like to pick the brains of all the antenna guru's here. I am
>> >trying to get ready for the contest. For the past few years I have used
>> > an non resonant inverted vee fed with 300 ohm line. The length is 90 feet
>> > per leg or 180 feet over all. the Apex is at 68 feet and the ends are at
>> > about 30 feet. This made a nice all band antenna. Recently I put up an
>> > A3S Cushcraft. Now I would like to change out the big inverted vee to
>> > something for 40 meters only. Choices inverted vee, 1/2 wave sloper,
>> > delta loop or diamond shaped quad. So here is your chance, what would be
>> > your choice and why.

>

>

>--

>

>You would just need to add a couple feet to your 180' CF antenna (I forget
>the exact dimension, around 186' total or so) .64 wavelength each leg. Would
>make a "Double Extended Zepp" on 40, which is a great antenna. It is always
>the first antenna I put up when I moved anywhere, since it works all bands,
>but is especially good on 40, where it has a theoretical gain of 3db.

>

> -----

> John L Sielke W2AGN

> w2agn@w2agn.net

> http://www.w2agn.net

>

>

Date: Mon, 29 Apr 2002 19:24:38 EDT

From: KE4VM@cs.com
To: qrp-1@lehigh.edu
Subject: [125770] Need several OHR100A 40M manual pages
Message-ID: <193.64986a5.29ff3036@cs.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Hi gang!

Need pages 19,20,23,24,25,26 and anything after 28, if there are any. There probably aren't any. Can anyone help with these missing pages?

THANKS,

Richard Prescott NM4Z

17 N. Grand Blvd.

Fairhope, Alabama 36532

Date: Mon, 29 Apr 2002 19:33:16 EDT
From: KE4VM@cs.com
To: qrp-1@lehigh.edu
Subject: [125771] WTB:Looking for a DD-1 Oak Hills Digital Display
Message-ID: <44.1f21ff69.29ff323c@cs.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Anybody got one of these lying around not being used?

Richard Prescott NM4Z

Date: Mon, 29 Apr 2002 19:01:16 -0500
From: "Stuart Rohre" <rohre@arlut.utexas.edu>
To: <jfox6@houston.rr.com>
Cc: <qrp-1@Lehigh.EDU>
Subject: [125772] British receiving site shown on the TV program
Message-ID: <005101c1efda\$262f5630\$4e100a0a@rohredt2000>

The British did use banks of the National receivers to scan for any military intercepts of the Axis transmissions they could find. I think they used multiple aeriels but am not sure they had one for each receiver. The receivers each had an operator, however, and there is a book on Clandestine operations out now that discusses some of the war time receiver useage. There is a French book reprinted to English but out of print now, that was the best source of the operational details of the spies in Europe and Resistance groups communications back to the multiple listening sites in U. K.

The receiver sites were out in the country estates and thus had room for rhombics and similar large gain antennas, as well as others. Since some distances to be covered to France were short by USA standards, a rhombic might have skipped over the closest clandestine transmitters they tried to monitor. Agents were told to not transmit longer than x time, and that was the time it had been determined for Axis DF units to get a fix on the QRP stations in use by the Resistance.

The DF arrangements were sophisticated, and used a combination of base stations, as far away as Germany, and then in France stations, with mobile units in trucks cruising neighborhoods, while the Gestapo would cut off AC power to see if the transmission ceased. Of course, the resistance was using QRP, so had battery back up. Then, they had DF agents with receivers under trench coats and hand held loops for block to block house to house searches. Some radios were suitcase sets, and they would typically be hidden and operated at a location different from where the agent lived. Antennas were wires, and often random wires at that. Transmission was CW, with elaborate precautions taken to verify each agent's fist, lest a captured radio be turned against the Allies to send false information.

Hopefully, someone from the G QRP list will weigh in with Receiving station aerial details.

72,

Stuart K5KVH

Date: Mon, 29 Apr 2002 20:20:43 -0400
From: "Mike Yetsko" <myetsko@insydesw.com>
To: <pstrdave@kdsi.net>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [125773] Re: Computer firewall
Message-ID: <002d01c1efdc\$e4c14700\$0600a8c0@charter.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I use the D-Link DI-701. And I set up a friend of mine with a DI-704. They're cheap, and they work well. Only down sides are the 701 is only 10mbit on the one side. And the 704 is a bear to configure if you want some VPN stuff.

LinkSys also has a decent unit.

The DI-701 and 704 units are pretty cheap. I saw the 704 for under \$60. The 701 is a single LAN tap, so here I feed a 4-port switch, and slave to a hub to handle the kids machines and the laptops. The 704 has 4 LAN taps, all 10/100..

Mike

----- Original Message -----

From: "David Heintzleman" <pstrdave@kdsi.net>

> I'm thinking of getting a high speed cable connection for internet - can
> always be on without tying up phone line
> - what you recommend as firewall?
> Dave K8BBM

Date: Mon, 29 Apr 2002 20:44:36 -0400
From: brickle <brickle@pobox.com>
To: myetsko@insydesw.com
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [125774] Re: Computer firewall
Message-ID: <3CCDE8F4.B4448CE0@pobox.com>
MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-transfer-encoding: 7BIT

> LinkSys also has a decent unit.

The LinkSys BEFW11S4 is really nice. It handles my 2 hardwired Linux boxes, my XYL's wireless link, and a random wireless laptop or two without a hiccup, and the installation is a no-brainer, thankfully. Plug'n'play with every OS in the house.

73
Frank
AB2KT

Date: Mon, 29 Apr 2002 21:25:04 -0400
From: "Robin Kidd" <robink@us.ibm.com>

To: qrp-1@Lehigh.EDU
Subject: [125775] Re: Computer firewall
Message-ID: <0F9A11347B.9DF73689-ON87256BAB.000778E3@boulder.ibm.com>
MIME-Version: 1.0
Content-type: text/plain; charset=us-ascii

Actually you don't need a hardware firewall. If you are running Windows you can use a free firewall called Tiny Firewall from tinysoft.com. I have used it in many installations and it is very robust. If you are running Linux your best choice is the use of ipchains - you need to be VERY familiar with Linux to use this. Just my two cents worth...

Regards,

Robin J. Kidd
KG4RSQ
Network Engineer
IBM Learning Services

Remember, the Ark was created by inspired amateurs but the Titanic was created by professionals...

kg4rsq@arrl.net

Date: Mon, 29 Apr 2002 21:46:30 -0400
From: Kenneth Hoglund <hoglund@wfu.edu>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [125776] OT: WWII Receiving
Message-ID: <3CCDF776.191E6B8F@wfu.edu>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

It was over a year ago that I asked a question to the list about the small near-qrp rigs that spies used during the "Big War," and several folks responded off-list with many helpful pieces of information. The most important point to my mind was that amateur and commercial shortwave use was closed down during the war, keeping the bands much quieter then than now.

There were also some really impressive listening posts in rural areas along the east coast of the US and Canada for listening to German transmissions. One account claimed US military stations along the east

coast were intercepting German troop and armor movement commands in North Africa, and relaying the info to the British High Command who relayed them to Montgomery in the field.

Also, if I've done the math correctly, wouldn't 1947 be a solar maximum, so the years immediately preceeding would have been kind to the upper bands??

Hmmm...quieted bands and more 'bounce' to the ionosphere: sounds like ideal qrp conditions to me!

73

Ken KG4FGC

Date: Mon, 29 Apr 2002 04:41:22 -0700
From: Dave Pomeroy <dave@dpomeroy.com>
To: QRP-L <qrp-l@Lehigh.EDU>
Subject: [125777] 2n2-40 yahoo group
Message-ID: <5.1.0.14.0.20020429044042.00a04c10@mail.dpomeroy.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Anyone know the name of the 2n2-40 yahoo group? Thanks for the info.

Dave Pomeroy K7DNP South Eastern Washington

Date: Mon, 29 Apr 2002 21:53:22 -0400
From: John R Kirby <n3aaz-qrp@juno.com>
To: qrp-l@Lehigh.EDU, jfox6@houston.rr.com
Subject: [125778] RE: Apology / WWII Radio Interception
Message-ID: <20020429.215329.-143543.5.n3aaz-qrp@juno.com>
MIME-Version: 1.0
Content-Type: text/plain
Content-Transfer-Encoding: 7bit

Apologize ? ? ?

For what ?

BULL DURM ! ! !

This is one of the more interesting radio topics . . .

Thank you for that post.

Maybe "the next generation of the defenders of
democracy" should read and head such topiaks . . .

The Codebreakers

Camp X

Bletchley Park

Blindmans Bluff

John
N3AAZ
FM 19 xa

From: <jfox6@houston.rr.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Date: Sun, 28 Apr 2002 18:48:17 -0500
Subject: Re: OT WWII Radio Interception rooms

From: Bob Nielsen <nielsen@oz.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Date: Sun, 28 Apr 2002 23:12:24 -0700
Subject: Re: OT WW II Radio Interception rooms

From: "Stuart Rohre" <rohre@arlut.utexas.edu>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Date: Mon, 29 Apr 2002 19:01:16 -0500
Subject: British receiving site shown on the TV program

. . . Thanks for the above posts.

John
N3AAZ
FM 19 xa

GET INTERNET ACCESS FROM JUNO!

Juno offers FREE or PREMIUM Internet access for less!
Join Juno today! For your FREE software, visit:
<http://dl.www.juno.com/get/web/>.

Date: Tue, 30 Apr 2002 01:55:39 -0000
From: "WI8W" <wi8w@arrl.net>

To: <qrp-1@lehigh.edu>
Subject: [125779] OT: Computer Firewall
Message-ID: <024001c1efea\$20f1fc80\$6501a8c0@attbi.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I have a cable modem connection to my network here at home with 6 computers and I use a free copy of ZoneAlarm on each and everyone of them and have never had a invasion from the outside since using it. It runs on Win 95, 98, NT, ME and XP. All of my computers run Win98SE. They are on 24/7.

www.zonealarm.com

Just my 2 cents worth

73

Thom WI8W

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system
(<http://www.grisoft.com>).
Version: 6.0.317 / Virus Database: 176 - Release
Date: 1/24/02

Date: Mon, 29 Apr 2002 22:01:22 -0400
From: John Wagner <john@wagner-usa.net>
To: <dave@dpomeroy.com>,
Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>
Subject: [125780] Re: 2n2-40 yahoo group
Message-ID: <B8F37331.25A6%john@wagner-usa.net>
Mime-version: 1.0
Content-type: text/plain; charset="US-ASCII"
Content-transfer-encoding: 7bit

It's called 2n2-40.

URL: <http://groups.yahoo.com/group/2n2-40/>

Post message: 2n2-40@yahoogroups.com
Subscribe: 2n2-40-subscribe@yahoogroups.com
Unsubscribe: 2n2-40-unsubscribe@yahoogroups.com

73,

John, N1Q0

> From: Dave Pomeroy <dave@dpomeroy.com>
> Reply-To: dave@dpomeroy.com
> Date: Mon, 29 Apr 2002 04:41:22 -0700
> To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
> Subject: 2n2-40 yahoo group
>
> Anyone know the name of the 2n2-40 yahoo group? Thanks for the info.
>
>
> Dave Pomeroy K7DNP South Eastern Washington
>
>

Date: Mon, 29 Apr 2002 19:42:08 -0700 (PDT)
From: Richard Fisher <ki6sn@yahoo.com>
To: QRP-L Reflector <qrp-l@lehigh.edu>
Cc: KI6SN@aol.com
Subject: [125781] Attention: April Spartan Sprint Participants
Message-ID: <20020430024208.98567.qmail@web12107.mail.yahoo.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

Please accept my apologies in advance if you pariticipated in the April Spartan Sprint and your callsign is not listed below as being among those whose logs we have in hand.

Because contest manager Russ Carpenter, AA7QU, has been out of the country, we've had to hang on to your April reports until he gets back. Unfortunately, I have a sinking feeling that there is a glitch in our filing system and some logs may have been automatically - and inadvertently - purged.

I have created a program to prevent this from happening again. Unfortunately, for some of you this might come as too little too late. I'm very sorry.

Logs from the radio amateurs listed below have been received for the

April Spartan Sprint. If you participated in April's Sprint but do not see your callsign listed here and want to submit a log, please go to the ARS web site:

<http://www.natworld.com/ars/>

Click on Popular Events. Then click on The Spartan Sprint AutoLog.

Fill in the blanks and send your report using this AutoLog filing system. Deadline for submissions for the April Spartan Sprint has been extended to Friday, May 3.

April Spartan Sprint logs received:

WD3P
N3AO
N4BP
NU3N
K3TW
K4GT
KI7N
AA8SN
K0EVZ
N0TK
NG8S
VE3SMA
K4AVX
WA8ZBT
KQ6NO
K0BFT
NC7X
KA8LLE
KL7RHJ
K7QO

Again, my sincere apology to anyone whose log might have been lost. Many thanks to all for your ongoing support of ARS and for your kind cooperation.

Russ is wrapping up his work abroad. I'll keep you posted on his return to the states. He has been sorely missed as contest manager.

Richard Fisher, KI6SN
KI6SN@yahoo.com

Do You Yahoo!?
Yahoo! Health - your guide to health and wellness
<http://health.yahoo.com>

Date: Mon, 29 Apr 2002 21:02:12 -0600
From: "James R. Duffey" <jamesd1@flash.net>
To: <qrp-1@lehigh.edu>
Cc: <aa4lr@arrl.net>
Subject: [125782] Re: Antenna Impedance (was: RE: Mobile whips)
Message-ID: <B8F36554.14798%jamesd1@flash.net>
Mime-version: 1.0
Content-type: text/plain; charset="US-ASCII"
Content-transfer-encoding: 7bit

Bill - Good post.

I think that you made a typo or had a senior moment when you posted:

"R(s)/R defines the efficiency."

earlier you had defined the terms:

"...here R(r) is the radiation resistance, and R(s) is the total loss
(defined as a series resistance)."

Clearly your expression goes the wrong way, that is efficiency increases as
losses (R(s)) increases.

The efficiency is given by:

 Power radiated by the antenna
efficiency = _____

total power fed to the antenna

Using your nomenclature, if a current I is fed to the antenna the efficiency is;

$$\text{efficiency} = \frac{(I^2) \cdot R(r)}{(I^2) \cdot (R(r)) + (I^2) \cdot (R(s))}$$

The I^2 terms cancel leaving

$$\text{efficiency} = \frac{R(r)}{R(r) + R(s)}$$

This expression gives greater efficiency with lower loss resistance, obviously the right direction. Your expression predicts higher efficiency with higher loss resistance, obviously the incorrect direction to go.

It is instructive to look at the efficiency of some popular antennas.

Lets look at a 20 M dipole made from #14 gauge wire a half wavelength above ground. The radiation resistance is about 70 Ohms, the resistance of the wire 1.5 Ohms. There is some loss associated with the ground, but it is hard to estimate. Call it 5 Ohms. So the efficiency is:

$$\text{efficiency} = 70 / (70 + 1.5 + 5) = 70 / 76.5 = .915 \text{ or } 91.5 \% \text{ efficiency.}$$

This means if you feed 5 watts to the antenna , 4.6 watts or so will be radiated. Not too bad.

If we replace the wire with 1/2 inch aluminum tubing with a resistance of 0.25 Ohms, the efficiency raises to 93%, or 4.7 watts radiated. The increase in efficiency is not worth the additional cost of the aluminum.

Now consider a quarter wavelength vertical for 20 M made out of 0.5 inch aluminum, over what is a more than reasonable amateur ground, say 30 radials 0.25 wavelengths long. The antenna has a radiation resistance of 38 Ohms, the resistance of the radiator is 0.13 Ohms, and the ground resistance is 12 Ohms, giving an efficiency of 75% or 3.8 watts radiated for 5 watts input.

If instead of a single band monopole, suppose we use a trapped vertical for 20 M - 10 M. The antenna length will be shortened by the inductive loading of the higher band traps, resulting in a lower radiation resistance, say 25 Ohms or so. The resistance of each trap will be 2 Ohms, with the same ground resistance of 12 Ohms, the efficiency is about 61% or 3 watts radiated for 5 watts input. Down from a full sized monopole by about 1.7 dB.

What if we replace the monopole with a 20 M HamStick or similar mobile antenna? The radiation resistance will be on the order of 8 Ohms, the ground resistance is still 12 Ohms, and the coil resistance will be 2 Ohms (assuming a Q of 300, which is probably high for the Hamstick), then the efficiency is 36%. This is 1.8 watts radiated for an input of 5 watts, and we probably want to start wondering if this compromise is really worth it. Remember I used liberal estimates here. The actual losses are probably worse.

More likely, the HamStick is deployed over a poorer ground, say 2 quarter wave radials. This has a ground resistance of 28 Ohms, for an efficiency of 21%, or about 1 watt radiated for the 5 watts input. Things don't look so good here.

What if we deploy the Hamstick back to back with another Hamstick for a horizontal loaded dipole? The radiation resistance doubles to 16 Ohms. Mount it at a half wave above ground, and the ground resistance will be about the same 5 Ohms we assumed earlier. The coil loss resistance will grow to 4 Ohms, but the efficiency has now grown to 64%. This is 3.2 watts radiated for the 5 watts input and it starts to look like a reasonable antenna. Erected at lower heights, the ground loss will increase, but this still seems like the preferred configuration to use the Hamstick in for portable operations.

I hope that this helps someone. - Dr. Megacycle KK6MC/5

--

James R. Duffey KK6MC/5
Cedar Crest, NM DM65

Date: Mon, 29 Apr 2002 21:19:33 -0600
From: "James R. Duffey" <jamesd1@flash.net>
To: <qrp-1@lehigh.edu>
Cc: <aa4lr@arrl.net>
Subject: [125783] Re: Antenna help.
Message-ID: <B8F36965.1479D%jamesd1@flash.net>
Mime-version: 1.0
Content-type: text/plain; charset="US-ASCII"
Content-transfer-encoding: 7bit

Bill - You gave some good advice.

However, your statement:

"...inverted V, 1/2 wave sloper, delta loop (fed at bottom or top), or quad (fed at bottom or top) -- they are all horizontally polarized, much like

your existing inverted V."

is somewhat misleading. The inverted vee will have moderate vertically polarized radiation off the ends. It sort of looks like a W8JK in those directions. A sloper erected at 45 degrees slope will have roughly equal power radiated in the vertical and horizontal components.

Even a horizontal dipole erected above ground will have some vertically polarized radiation, particularly off the ends. These patterns are shown in Figures 13 and 14 of Chapter 3 of "The ARRL Antenna Book", 19th Edition. Earlier editions also have these plots. The vertically polarized radiation is down about 10 dB at a half wave height from the horizontally polarized components, but it is there. Only a dipole erected in free space will have entirely horizontally polarized radiation. This vertically polarized radiation is a result of reflections from the ground.

I hope that this clarifies things somewhat. - Dr. Megacycle KK6MC/5

--

James R. Duffey KK6MC/5
Cedar Crest, NM DM65

Date: Mon, 29 Apr 2002 23:55:22 -0400 (EDT)
From: George Gingell <k3tks@u1.abs.net>
To: QRP List <qrp-l@Lehigh.EDU>
Subject: [125784] [OT] Is it really OT?
Message-ID: <20020429234026.H190-100000@u1.abs.net>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

I found the discussion interesting. The Best Response Award goes to Keith, WB2VUO.

"There is no such thing as a stupid question, but there are a bunch of Stupid replies at times"

Amen!

Ordinarily I would not even bother sending a reply to one of these topics as it just adds to the word count and helps make the thing run on longer than it should.

There are several ways to handle [OT] messages.

1. You can use a FILTER, but then you run the risk of missing something that

you might actually have found interesting.

2. You could could just read and/or DELETE. (My normal Mode).

3. You could Read and give a HELPFUL COMMENT or reply. (Direct if appropriate).

4. Or you could add a totally irrelevant comment that adds nothing except to the word count on the list. This usually brings you fame, fortune and an increase of respect and popularity with members or the list.

I guess that means that I can now expect more junk and hate mail as a result of my \$.02 on the subject.

Oh Well, I still have a working DELETE key and I know how and when to turn the Computer off and plug in the soldering iron or Key.

OBTW I also enjoyed the WWII War stories and Facts.

I also own an HRO-60...

QRPP Dx Tu, (C) 2002 K3TKS

Sir George, The First :^}

72 ES QRP DX TU (C) 1986, G. "Danny" Gingell, K3TKS@ abs.net
Former QRP A.R.C.I. Net Manager and Board of Director Member.
Gingell & Company, Ltd. Small Business Telephone Systems, Handyman Services,
Commercial & Residential Locksmith Services (301) 572-6789 Office & Fax
George D. Gingell, Jr. 3052 Fairland Road, Silver Spring, MD 20904-7117
Maryland Milliwatt Club QRP Reference Library, (301) 572-6789 IQRR #1,
Maryland Milliwatt Club Founder and Trustee of Club Station - WQ3RP -
Grid Square FM19mb 76.94 W - 39.06 N Silver Spring, MD 20904 QRPea.A.

Collector of Quartz Crystals and Telegraph Keys.

Maryland Milliwatt Club QRP Reference Library, Donations Accepted.

"72" = "Wishing You Good QRP" (C) 1991 Oleg Borodin, RV3GM

Date: Tue, 30 Apr 2002 00:22:27 -0400
From: "Robin Kidd" <robink@us.ibm.com>

To: qrp-1@Lehigh.EDU
Subject: [125785] Re: Computer firewall
Message-ID: <0FD0D7A2CF.0552AAD6-0N87256BAB.0017F196@boulder.ibm.com>
MIME-Version: 1.0
Content-type: text/plain; charset=us-ascii

Actually you can still use ipchains if you want to. You do not have to upgrade to iptables...

Regards,

Robin J. Kidd
KG4RSQ
Network Engineer
IBM Learning Services

Remember, the Ark was created by inspired amateurs but the Titanic was created by professionals...

kg4rsq@arrl.net

"ZOOM" <kandrparker@sympatico.ca> on 04/29/2002 10:32:24 PM

To: Robin Kidd/Atlanta/IBM@IBMUS
cc:
Subject: Re: Computer firewall

The new version of Linux 7.2 no longer uses ipchains. It's now iptables. They are configured somewhat differently. Watch for security holes though!

Robert
VE3RPF

----- Original Message -----

From: "Robin Kidd" <robink@us.ibm.com>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Sent: Monday, April 29, 2002 9:25 PM
Subject: Re: Computer firewall

>

> Actually you don't need a hardware firewall. If you are running Windows
> you can use a free firewall called Tiny Firewall from tinysoft.com. I

have

> used it in many installations and it is very robust. If you are running
> Linux your best choice is the use of ipchains - you need to be VERY
> familiar with Linux to use this. Just my two cents worth...

>

> Regards,

>

> Robin J. Kidd

> KG4RSQ

> Network Engineer

> IBM Learning Services

>

> Remember, the Ark was created by inspired amateurs but the Titanic was
> created by professionals...

>

> kg4rsq@arrl.net

>

>

Date: Tue, 30 Apr 2002 00:26:50 -0400 (EDT)
From: George Gingell <k3tks@u1.abs.net>
To: QRP List <qrp-l@Lehigh.EDU>
Subject: [125786] [OT] PCB Cleaning & Aluminum Work
Message-ID: <20020429235531.S190-100000@u1.abs.net>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Not sure if [OT] was OFF/ON Topic :^} Part on, part off ?

Cleaning off the Etching Coating (Toner?) can be done with a wide variety of chemicals. Some are lots Safer than Others. Some are also much faster than others. (Usually faster = more Dangerous).

I usually try Alcohol, Varsol, Paint Thinner, Etc. as they are cheap and relatively safe around the house.

I also use GOOF OFF (Tm) a Painters Product that is mainly used for Latex Type Paints that got where they should not have..

I also keep a small bottle of fingernail polish remover in the shop.

Years ago I used Steel Wool or SOS Pads for cleaning boards, but they tend

to leave oils, soap and/or metal fibers on the board.

I find that ScotchBrite (Tm) Pads (Available in different Grades) are the Best when stubborn substances are involved.

The Paint Department will have them in different Grades, fine, medium and coarse. Use Fine for pcb work.

Aluminum Tap and Die work: It looks like several have already covered this one fairly well, with one exception. Cleaning the Dies.

Aluminum, is a bit of a bugger when it comes to Drills, Taps and Dies. It clogs them up rather quickly. All the more reason to use lubricant on the work as well as the dies. Before, during and after.

There are Cone shaped Wire Brushes which are very handy for keeping the Dies cleaned.

I don't know if there are Special Dies available for tapping Aluminum or not. I will have to see if I can get an answer on that one.

In a pinch, you can make a workable die out of a Standard Nut with some slots cut in it. Usually 4. On larger Nuts, you can drill 4 holes and then file to to the hole from the inside. Or Use a Jewlers Saw.

As many have mentioned, the Secret of Tapping Aluminum is Go Slow and Back Up Often.

One Last [00TT] [Off/On Topic Tip]

Cleaning Laser Diode Lenses or any Computer parts for that matter.

Be CAREFUL of what you use. Windex was suggested by Steve Weber and I would agree to that provided that it is Original not one with Ammonia or other Unknown Additives. Also I DO NOT Recommend ALOCHOL. It may dissolve some types of Plastic. Don't want to Blind the LED, do we?

If in doubt, see your friendly Copy Machine Repairman. (My Son provides all of my Specialty Chemicals).

Thanks also to Adam for the interesting info on CD-Rom Setup.

(For those who must reply) Direct Please, as I get the list by Digest and am a day behind.

QRPP Dx Tu, (C) 2002 K3TKS

Sir George, The First :^}

72 ES QRP DX TU (C) 1986, G. "Danny" Gingell, K3TKS@abs.net
Former QRP A.R.C.I. Net Manager and Board of Director Member.
Gingell & Company, Ltd. Small Business Telephone Systems, Handyman Services,
Commercial & Residential Locksmith Services (301) 572-6789 Office & Fax
George D. Gingell, Jr. 3052 Fairland Road, Silver Spring, MD 20904-7117
Maryland Milliwatt Club QRP Reference Library, (301) 572-6789 IQRR #1,
Maryland Milliwatt Club Founder and Trustee of Club Station - WQ3RP -
Grid Square FM19mb 76.94 W - 39.06 N Silver Spring, MD 20904 QRPea.A.

Collector of Quartz Crystals and Telegraph Keys.

Maryland Milliwatt Club QRP Reference Library, Donations Accepted.

"72" = "Wishing You Good QRP" (C) 1991 Oleg Borodin, RV3GM

Date: Mon, 29 Apr 2002 23:50:47 -0600
From: "P.Ermisch" <ermisch@usa.net>
To: <qrp-l@Lehigh.EDU>
Subject: [125787] QRPTTF first-timer
Message-ID: <20020430055047.19597.qmail@uwdvg020.cms.usa.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: quoted-printable

I operated from Echo Lake Park in Clear Creek county, Colorado. This is =
a
Denver Mountain Park in the shadow of Mt. Evans, one of three 14K-foot pe=
aks
visible from Denver. I thought about going further up the valley and hiki=
ng to
Chicago Lakes, but been out of the hiking mode for a few years. The
quarter-mile around the lake was enough for the day.

This turned out to be my first FYBO as well since the temp was below free=
zing
when I arrived and there was a healthy dusting of snow everywhere. I wal=
ked
to the opposite side of this alpine lake and set up on one of the picnic
benches. I used a 4-band K1 although it turned out I didn't need 40 or 1=

5. =

Ant was a DK9SQ 40-10M vertical loop.

Got started a little after 1500Z and within the next hour I'd bagged 8 Q's while snow fell, sometimes as a blizzard. By lunchtime, though, the sun was out and hikers/anglers were walking by in shorts and t-shirts. I shivered in the shade wearing three layers of high-tech clothing. Operated standing up after lunch to keep the blood flowing. There was a breeze, sometimes hard gusts, but the trees protected me most of the time. I could've done a nice dipole with the 50-foot pines around but I'm not skilled with the slingshot yet.

By the time I shut down at 21:30: 41 q (2 dupes), 20 spc, 28800 pts =

20M seemed to be the only open band for me. One excursion onto 40M resulted in a contact with a 1KW vintage rig station in WY who was appreciative of the QRP effort. Only 2 q's on 15M - K50J (who was coming in gangbusters on 20M all day) and VE7SL. Heard a few others and made calls on 15M at various times but no joy. No 10M rig so on 10M contacts. From the log, it appears there was a pipeline to TX since 20% of my contacts were to that state. Picked up the elusive DE (thanks to W3IYQ/W2AGN for pulling me out of the digital QRM just as I was trying to return the exchange!) Also got two ME's which surprised me a bit. Mostly S&P with a little CQ.

I see that N0TU, et al, were 50 or 60 miles south of me. Didn't hear 'em but did bag a couple of other CO stations (KI0II and WA8NTA).

The DK9SQ loop was extremely quiet and heard very well - perhaps too well =2E =

Many stations I called never heard me but I could hear them perhaps Q3 or=

Q4

(some Q2's as well). It took me about 25 minutes to set up (this was my =
third
time doing so), 15 to tear down. Used a guy setup as recommended by VE3J=
C in
his ARS article. The only problem with the loop is that the K1 tuner wou=
ld
not match on 30 or 15 - guess I need to mess with the feedline a bit. Ha=
d my
Emtech ZM-2 along anyway. I was sending 599's most of the day and only
getting 559's back - perhaps it's not getting out as I thought it would.

Had a few interested passers-by including an RF engineer. Not a ham but =
was
curious about my rig and antenna and we had a nice conversation. Thanks =
to
all in my logbook and a great time. BTW, logged using 'waterproof paper'=
-
great stuff!

de Paul KB0LUR

Date: Tue, 30 Apr 2002 01:01:37 -0500
From: "George, W5YR" <w5yr@att.net>
To: ermisch@usa.net
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [125788] Re: QRPTTF first-timer
Message-ID: <3CCE3341.D91733A6@att.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Sounds like a lot of fun despite the wx.

On the reports, don't be concerned. Most use memory keyers with the QRP
"default" signal report of "559" already programmed in. Th main thing is
that you heard and worked the stations . . .

Our NETXQRP operation here in Fairview, TX was in 85 deg wx with some wind
and fair band condx. Made about 50 q's but haven't figured out the final
score yet.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!

QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

"P.Ermisch" wrote:

>
> I operated from Echo Lake Park in Clear Creek county, Colorado. This is a
> Denver Mountain Park in the shadow of Mt. Evans, one of three 14K-foot peaks
> visible from Denver.

Date: Tue, 30 Apr 2002 01:37:20 -0500
From: "Hal" <kc0bdw2@hotmail.com>
To: "Qrp-L" <qrp-l@Lehigh.EDU>
Subject: [125789] qrp manual
Message-ID: <000801c1f011\$7a745880\$802f0d44@mine>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Thank you too all with offers for a manual..
KC0BDW

Date: Tue, 30 Apr 2002 04:21:22 -0600
From: "Francis Callahan" <colcal@srv.net>
To: <n3aaz-qrp@juno.com>,
 "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [125790] Re: Apology / WWII Radio Interception
Message-ID: <001301c1f030\$c82eeee0\$35de070c@callahan>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Apologize HELL That was a great period in American History 72 Cal KF7ET

----- Original Message -----

From: "John R Kirby" <n3aaz-qrp@juno.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Monday, April 29, 2002 7:53 PM
Subject: RE: Apology / WWII Radio Interception

>

> Apologize ? ? ?
> For what ?
> BULL DURM ! ! !
> This is one of the more interesting radio topics . . .
> Thank you for that post.
>
> Maybe "the next generation of the defenders of
> democracy" should read and head such topiaks . . .
>
> The Codebreakers
>
> Camp X
>
> Bletchley Park
>
> Blindmans Bluff
>
> John
> N3AAZ
> FM 19 xa
>
> From: <jfox6@houston.rr.com>
> To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
> Date: Sun, 28 Apr 2002 18:48:17 -0500
> Subject: Re: OT WWII Radio Interception rooms
>
> From: Bob Nielsen <nielsen@oz.net>
> To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
> Date: Sun, 28 Apr 2002 23:12:24 -0700
> Subject: Re: OT WW II Radio Interception rooms
>
> From: "Stuart Rohre" <rohre@arlut.utexas.edu>
> To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
> Date: Mon, 29 Apr 2002 19:01:16 -0500
> Subject: British receiving site shown on the TV program
>
> . . . Thanks for the above posts.
>
> John
> N3AAZ
> FM 19 xa
>
>
> -----
> GET INTERNET ACCESS FROM JUNO!
> Juno offers FREE or PREMIUM Internet access for less!
> Join Juno today! For your FREE software, visit:
> <http://dl.www.juno.com/get/web/>.

Date: Tue, 30 Apr 2002 05:54:54 -0500
From: Nick Kennedy <nkennedy@tcainternet.com>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [125791] RE: Apology
Message-ID: <01C1F00B.8DA6A620.nkennedy@tcainternet.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit

Hey guys: who is the villain here? I saw a post on WW2 intelligence work, several positive responses, an apology, and several irate responses to the apology. Is there a bad guy here? Or is this all theoretical?

If we're moving to a new level, there are several people who don't exist that are making me pretty mad and I want to tell 'em off on QRP-L.

72--Nick, WA5BDU

-----Original Message-----
From: John Paul Keon [SMTP:jpkeon@nc.rr.com]
Sent: Monday, April 29, 2002 1:45 PM
To: Low Power Amateur Radio Discussion
Subject: Re: Apology

I would not apologize. You have your given rights in this country to free speech, and the right to talk and converse about just about anything now. The ex-pres provided a great incentive for that as well as many others. Tell the other person to take a hike, and don't stop.
AB4PP
John Paul, Raleigh, NC

Date: Tue, 30 Apr 2002 07:52:57 -0400
From: W2AGN <w2agn@w2agn.net>
To: Nick Kennedy <nkennedy@tcainternet.com>,
Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [125792] Re: Apology
Message-ID: <0204300752570C.04101@jsielke>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1
Content-transfer-encoding: 7BIT

On Tuesday 30 April 2002 06:54, Nick Kennedy wrote:

> Hey guys: who is the villain here? I saw a post on WW2 intelligence work,
> several positive responses, an apology, and several irate responses to the
> apology. Is there a bad guy here? Or is this all theoretical?
>
> If we're moving to a new level, there are several people who don't exist
> that are making me pretty mad and I want to tell 'em off on QRP-L.
>
> 72--Nick, WA5BDU

--

I believe one of the QRP-L TOPIC POLICE had chosen to speak on the post,
causing an apology, which was unnecessary.

John L Sielke W2AGN
w2agn@w2agn.net
<http://www.w2agn.net>

Date: Tue, 30 Apr 2002 08:21:20 -0400
From: "Jim Kortge, K8IQY" <jokortge@prodigy.net>
To: dave@dpomeroy.com
Cc: qrp-l@lehigh.edu
Subject: [125793] Re: 2n2-40 yahoo group
Message-ID: <5.1.0.14.1.20020430081931.00a61320@pop.prodigy.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 04:41 AM 4/29/02 -0700, you wrote:

>Anyone know the name of the 2n2-40 yahoo group? Thanks for the info.
>
>
>Dave Pomeroy K7DNP South Eastern Washington
>
>

Dave,

Try <http://groups.yahoo.com/group/2n2-40/>

72,

Jim, K8IQY

Date: Tue, 30 Apr 2002 13:12:11 +0000
From: "Leon Heller" <leon_heller@hotmail.com>
To: k3tks@u1.abs.net, qrp-1@Lehigh.EDU
Subject: [125794] Re: [OT] PCB Cleaning & Aluminum Work
Message-ID: <F186sn3jnmPFmNuQS4d000053a4@hotmail.com>
Mime-Version: 1.0
Content-Type: text/plain; format=flowed

>From: George Gingell <k3tks@u1.abs.net>
>Reply-To: k3tks@u1.abs.net
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
>Subject: [OT] PCB Cleaning & Aluminum Work
>Date: Tue, 30 Apr 2002 00:26:50 -0400 (EDT)
>
>Not sure if [OT] was OFF/ON Topic :^} Part on, part off ?
>
>Cleaning off the Etching Coating (Toner?) can be done with a wide variety
>of chemicals. Some are lots Safer than Others. Some are also much faster
>than others. (Usually faster = more Dangerous).
>
>I usually try Alcohol, Varsol, Paint Thinner, Etc. as they are cheap and
>relatively safe around the house.

I use cellulose thinners. It works fine on PnP and on standard positive resist.

For cleaning the copper on PCBs I use Ajax or a polishing block -rubber with abrasive specially made for PCBs. They actually solder very well after a wipe with thinners. A spray-on flux is useful to stop them corroding.

73, leon

--

Leon Heller, G1HSM Tel: +44 1327 359058 Email:leon_heller@hotmail.com
My web page: http://www.geocities.com/leon_heller
My low-cost Altera Flex design kit: <http://www.leonheller.com>

Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

Date: Tue, 30 Apr 2002 09:38:45 -0400
From: Bruce Muscolino <w6toy@erols.com>
To: tmyers@AcademicPlanet.com, qrp-1@lehigh.edu
Subject: [125795] Re: OT Posts in General
Message-ID: <3CCE9E65.AF67FBBD@erols.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Does this mean that the entry price of ham radio has suddenly jumped by maybe \$500? While computers are a useful accessory, they really are not necessary to ham radio! Many of us use them, but they are not communications devices at the bottom of it all!

73

Date: Tue, 30 Apr 2002 09:42:23 -0400
From: "Ronald A Pfeiffer" <Ronald_A_Pfeiffer@raytheon.com>
To: neqrp@jonal.net, qrp-1@Lehigh.EDU
Subject: [125796] NEQRP SSB NET Tuesday
Message-ID: <0F549FC488.9D6C552C-0N85256B9C.0053562F@and.us.ray.com>
MIME-Version: 1.0
Content-type: text/plain; charset=us-ascii

The NEQRP SSB NET:

Date: Tuesday night
Time: 07:30PM EDST second round for late checkins at 08:30 PM EDST
Freq: 7.285 Mhz +- 5Khz
Net OP : Ron N1ZSW

Everyone pick up the mic , "key" the PTT and share in the NEQRP SSB experience. All welcome.

Ron - N1ZSW

Date: Tue, 30 Apr 2002 09:53:56 -0400
From: "Kwik, Ed " <ed.kwik@delphiauto.com>
To: "QRP-L (E-mail)" <qrp-l@Lehigh.EDU>
Subject: [125797] Michigan QRP Net tonight
Message-ID:
<9F176F70FD71AC48AFC36F879D2B84E38F3694@tryexch01.NorthAmerica.DelphiAuto.net>
content-class: urn:content-classes:message
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

OK is Tuesday again. Time for another session of the Michigan QRP net. =
The net meets each Tuesday night at 9:00 PM Eastern time (0100 UTC =
Wednesday) on 3.535 MHz. All hams are welcome. We had seven checkins =
last week with fair conditions.

Ed AB8DF Waterford, MI

Date: Tue, 30 Apr 2002 10:20:45 -0400
From: "W2WU" <w2wurjj@verizon.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [125798] General Post
Message-ID: <001101c1f052\$499e9a40\$71c2fea9@w2wu>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

List:

Computers are integral communication devices, controllers, speech processors
& for some Amateur's, their sole communications with the outside world. W2WU
Member: ARRL, CCA, CRA, Courage Center / Handi Hams

----- Original Message -----

From: Bruce Muscolino <w6toy@erols.com>
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Sent: 30 April, 2002 09:38
Subject: Re: OT Posts in General

> Does this mean that the entry price of ham radio has suddenly jumped by
> maybe \$500? While computers are a useful accessory, they really are not
> necessary to ham radio! Many of us use them, but they are not
> communications devices at the bottom of it all!
>

> 73

Date: Tue, 30 Apr 2002 10:26:16 -0400
From: "Mike Yetsko" <myetsko@insydesw.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [125799] Re: OT Posts in General
Message-ID: <001d01c1f052\$ffad0c40\$0600a8c0@charter.net>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

This is almost as narrow thinking as saying CW on HF is the only method
for QRP!

Mike

----- Original Message -----

> Does this mean that the entry price of ham radio has suddenly jumped by
> maybe \$500? While computers are a useful accessory, they really are not
> necessary to ham radio! Many of us use them, but they are not
> communications devices at the bottom of it all!

Date: Tue, 30 Apr 2002 10:23:13 -0400
From: Bill Coleman <aa4lr@arrl.net>
To: "James R. Duffey" <jamesd1@flash.net>, "QRP" <qrp-l@lehigh.edu>
Subject: [125800] Re: Antenna Impedance (was: RE: Mobile whips)
Message-ID: <1020330102300.KAA28605@gate.iterated.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

On 4/29/02 11:02 PM, James R. Duffey at jamesd1@flash.net wrote:

>Bill - Good post.
>
>I think that you made a typo or had a senior moment when you posted:
>
>"R(s)/R defines the efficiency."

Can you have "senior moments" at age 41?

>earlier you had defined the terms:

>

>"...here R(r) is the radiation resistance, and R(s) is the total loss

>(defined as a series resistance)."

>

>Clearly your expression goes the wrong way, that is efficiency increases as

>losses (R(s)) increases.

>

>The efficiency is given by:

>

> Power radiated by the antenna

>efficiency = _____

>

> total power fed to the antenna

>

>Using your nomenclature, if a current I is fed to the antenna the efficiency

>is;

> (I**2)*R(r)

>efficiency = _____

>

> (I**2) (R(r)) + (I**2)*(R(s))

>

>The I**2 terms cancel leaving

> R(r)

>efficiency = -----

> R(r) + R(s)

Right! And R = R(r) + R(s), which gives:

efficiency = R(r) / R

Hmm. I suppose I got that backwards....

Thanks for helping me on the math.

Bill Coleman, AA4LR, PP-ASEL Mail: aa4lr@arrl.net

Quote: "Not within a thousand years will man ever fly!"

-- Wilbur Wright, 1901

Date: Tue, 30 Apr 2002 07:34:45 -0700

From: "Tracy Markham" <tracy@bytemark.com>

To: "QRP-L" <qrp-l@lehigh.edu>, <wi8w@arrl.net>
Subject: [125801] RE: Computer Firewall
Message-ID: <NFBKLDHALEHCJMAJPKFIEIHDAAA.tracy@bytemark.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I run ZoneAlarm, like it ... but I found something lately that you might consider.

I got a little program called 'adaware' someone mentioned on this list that finds software that 'reports' activities. They rarely trigger ZA ... I was amazed at how many 'reporters' were on my system.

My \$.02

Tracy N4LGH

Date: Tue, 30 Apr 2002 10:59:31 -0400
From: Bruce Muscolino <w6toy@erols.com>
To: w2wurjj@verizon.net
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [125802] Re: General Post
Message-ID: <3CCEB153.A6288382@erols.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

While I agree with everything you have said, the necessity of having a computer in the shack is in direct opposition to the QRP trend toward simple equipment design. It seems ludicrous to have a \$100 radio flanked by a \$500 computer! Now, if you are talking about a \$1000 radio I might see it! Everything in perspective. Computers are not necessary evils nor advantages!

73

Date: Tue, 30 Apr 2002 10:45:06 -0400
From: "Mike Yetsko" <myetsko@insydesw.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [125803] Re: General Post

Message-ID: <003101c1f055\$a005b6e0\$0600a8c0@charter.net>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Bruce

Now you're trying to define what is and is not QRP again. You're definition of QRP seems to be a minimalist hardware approach. The guy tinkering in his basement to make gear with the fewest number of components. Ok, fine, make your transmitter with a single CMOS gate and a colorburst crystal and a couple of resistors and caps, but there's a lot more to QRP than Tuna Tins and Altoids boxes.

Or are you saying that rigs aren't QRP because they don't fit your definition of price point? Ok, kick out the 817 and Elecraft people.

What about PSK or other digital modes?

What about VHF?

What about experimentation above UHF?

What about laser?

What about SSB? On ANY frequency?

What about DSP work?

Narrow thinking....

Mike

----- Original Message -----
From: "Bruce Muscolino" <w6toy@erols.com>

> While I agree with everything you have said, the necessity of having a
> computer in the shack is in direct opposition to the QRP trend toward
> simple equipment design. It seems ludicrous to have a \$100 radio
> flanked by a \$500 computer! Now, if you are talking about a \$1000 radio
> I might see it! Everything in perspective. Computers are not necessary
> evils nor advantages!

Date: Tue, 30 Apr 2002 08:47:53 -0600 (CST)
From: Bruce Rattray <rattray@gpfn.sk.ca>
To: Bill Stietenroth <k5zty@juno.com>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [125804] Re: QRP To The Field 2002 de K50J
Message-ID: <Pine.LNX.4.33.0204300847140.13623-1000000@neale.gpfn.sk.ca>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

OK Bill...vy interesting report...wondering who "CQ the Wonder Bird" is?

..72/73 - Bruce (VE5RC+VE5QRP) QRP-C#1 QRP-L#886 ARCI#9683 Zombie#272
A-1 Operator Club - 10/10# 944 - QRP Borg#1 - Whiner#10 -
- VE5QRP SOC#11 - VE5RC SOC#12 - oo#148 - K2#2032 - COG#15 -
"QRP! How sweet it is!" "I am da man wit "DAH" paddle!"

Date: Tue, 30 Apr 2002 10:48:12 -0400
From: "Ronald A Pfeiffer" <Ronald_A_Pfeiffer@raytheon.com>
To: qrp-l@Lehigh.EDU
Subject: [125805] PSK31 band selection?
Message-ID: <0FB13FC114.F38BF314-ON85256BAB.00513811@and.us.ray.com>
MIME-Version: 1.0
Content-type: text/plain; charset=us-ascii

I wanted to get into PSK31 and wanted to know which band has the most activity to optimize my investment.

Thanks in advance.

Ron - N1ZSW

Date: Tue, 30 Apr 2002 08:48:46 -0600
From: tailfeathers@juno.com
To: w6toy@erols.com
Cc: qrp-l@Lehigh.EDU
Subject: [125806] Re: OT Posts in General

Message-ID: <20020430.085641.-1452201.3.tailfeathers@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Bruce...Uh...never mind. Whats the use?

Gary

On Tue, 30 Apr 2002 09:38:45 -0400 Bruce Muscolino <w6toy@erols.com>
writes:
> Does this mean that the entry price of ham radio has suddenly jumped
> by
> maybe \$500? While computers are a useful accessory, they really are
> not
> necessary to ham radio! Many of us use them, but they are not
> communications devices at the bottom of it all!
>
> 73
>

GET INTERNET ACCESS FROM JUNO!
Juno offers FREE or PREMIUM Internet access for less!
Join Juno today! For your FREE software, visit:
<http://dl.www.juno.com/get/web/>.

Date: Tue, 30 Apr 2002 08:56:07 -0600
From: tailfeathers@juno.com
To: tracy@bytemark.com
Cc: qrp-1@Lehigh.EDU
Subject: [125807] Re: Computer Firewall
Message-ID: <20020430.085641.-1452201.4.tailfeathers@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Zone alarm isn't suppose to detect spyware it is suppose to limit it
ability to connect, send and receive data. Adaware detects and removes
spyware from your system. Adaware needs to be updated just like virus
definitions also. Go to their site and download their Refupdate program
and it will update the spyware definitions.

Gary

> I got a little program called 'adaware' someone mentioned on this
> list that
> finds software that 'reports' activities. They rarely trigger ZA ...
> I was
> amazed at how many 'reporters' were on my system.
>
> My \$.02
>
> Tracy N4LGH
>
>
>

GET INTERNET ACCESS FROM JUNO!
Juno offers FREE or PREMIUM Internet access for less!
Join Juno today! For your FREE software, visit:
<http://dl.www.juno.com/get/web/>.

Date: Tue, 30 Apr 2002 08:03:03 -0700
From: "Bill Jones" <kd7s@psnw.com>
To: <Ronald_A_Pfeiffer@raytheon.com>,
"Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [125808] Re: PSK31 band selection?
Message-ID: <002c01c1f058\$38bbbae0\$048d6bd1@j3s0p2>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Without a doubt, 20 meters currently has the most activity on a consistent basis.

=====
Bill Jones -- KD7S -- <><
Sanger, California
<http://www.psnw.com/~kd7s>
=====

----- Original Message -----
From: "Ronald A Pfeiffer" <Ronald_A_Pfeiffer@raytheon.com>

> I wanted to get into PSK31 and wanted to know which band has the
> most activity to optimize my investment.

Date: Tue, 30 Apr 2002 09:16:57 -0600
From: Rod Cerkoney <rod@n0rc.com>
To: <Ronald_A_Pfeiffer@raytheon.com>,
"Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [125809] Re: [PSK31 band selection?]
Message-ID: <20020430151657.23159.qmail@uwdvg001.cms.usa.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: quoted-printable

Ron, et.al.

I had the best luck on 20m. =

73, Rod N0RC
Fort Collins,CO

"Ronald A Pfeiffer" <Ronald_A_Pfeiffer@raytheon.com> wrote:
> I wanted to get into PSK31 and wanted to know which band has the
> most activity to optimize my investment.
> =

> Thanks in advance.
> =

> Ron - N1ZSW
> =

Date: Tue, 30 Apr 2002 15:25:00 GMT
From: Thomas Jennings <jennings@eznet.net>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [125810] Re: [PSK31 band selection?]
Message-ID: <20020430152500.25292.qmail@eznet.net>
Mime-version: 1.0
Content-type: text/plain; charset="us-ascii"

Gang,
I have the best luck on 20... but 15 is fairly active also.
73
tom, kv2x

Date: Tue, 30 Apr 2002 10:25:31 -0500
From: wa0goz@arrl.net
To: qrp-1 <qrp-1@Lehigh.EDU>
Subject: [125811] Re: XMLResponse
Message-ID: <3CCEB76B.16E1@arrl.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

qrp-1 wrote:

(nothing)

This e-mail was empty. What is it and why did I get it?
Hope it's not important.

Henry WA0GOZ

Date: Tue, 30 Apr 2002 11:25:25 -0400
From: "Mike Yetsko" <myetsko@insydesw.com>
To: <Ronald_A_Pfeiffer@raytheon.com>,
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [125812] Re: PSK31 band selection?
Message-ID: <005d01c1f05b\$5a538e00\$0600a8c0@charter.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Ron,

Don't you already have a QRP rig?

If it were me, (and I'm laid off!), I'd just run the PSK software (I forget
it's name right now) with your rig and the sound card interface and
actually
see what you can find in your area. Then use the activity you find to
decide what band to buy.

Mike

----- Original Message -----

From: "Ronald A Pfeiffer" <Ronald_A_Pfeiffer@raytheon.com>

> I wanted to get into PSK31 and wanted to know which band has the
> most activity to optimize my investment.
>
> Ron - N1ZSW

Date: Tue, 30 Apr 2002 10:35:41 -0500
From: "George, W5YR" <w5yr@att.net>
To: wa0goz@arrl.net
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [125813] Re: XMLResponse
Message-ID: <3CCEB9CD.28EAEA83@att.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

This may be all that remains after your virus checker stripped off the bad stuff. I get a lot of "blank" emails but they always are associated with virii that have been trapped and removed by Norton AV 2002.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

wa0goz@arrl.net wrote:

>
> qrp-l wrote:
>
> (nothing)
>
> This e-mail was empty. What is it and why did I get it?
> Hope it's not important.
>
> Henry WA0G0Z

--

Date: Mon, 29 Apr 2002 21:23:56 -0700
From: Dave Pomeroy <dave@dpomeroy.com>
To: QRP-L <qrp-l@Lehigh.EDU>
Message-ID: <5.1.0.14.0.20020429212311.00a09e30@mail.dpomeroy.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Thanks to all that replied. I'm back on the 2n2-40 group and have started building. Take care.

Dave Pomeroy K7DNP South Eastern Washington

Date: Tue, 30 Apr 2002 10:46:08 -0600
From: "David Fuller" <djfulle@qwest.com>
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [125815] [OT] Question on MP3 players
Message-ID: <3CCECA50.C023E0AC@qwest.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Anybody on the list familiar with mp3 players and the process of editing and downloading sound files.

I have a project in mind and have some questions.

Since this is off topic please reply direct

Thanks
-WD7Z

Date: Mon, 29 Apr 2002 22:04:25 -0700
From: "Doug Hendricks" <ki6ds@dph.dpol.net>
To: <qrp-l@Lehigh.EDU>
Subject: [125816] Need volunteer to build BLT for Blind Amateur
Message-ID: <010c01c1f004\$82ab89e0\$4a0b0d0a@dph.dpol.net>
MIME-Version: 1.0

Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I need a volunteer. A blind amateur wants one, but can't build because of his handicap. So, if there is someone out there who would like to build it for him, please contact me. He also wants S0239 connectors instead of BNC, but that won't be a problem. Email me if you can help out. Thanks, Doug

Date: Tue, 30 Apr 2002 13:53:51 -0400
From: Bruce Muscolino <w6toy@erols.com>
To: myetsko@insydesw.com
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [125817] Re: General Post
Message-ID: <3CCEDA2F.C1C35C8C@erols.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Mike,

I am definitely not a minimalist, but my experience is that many of the list members are! I normally use a TS130V. At the moment I am using a TS850. I have used a TS830 and a TS940. Do those sound like minimalist rigs?

What I am concerned about is that people will be put off from trying ham radio because of the cost. A radio is one thing, a radio and a computer is another. I suppose you (and many) don't see the difference.

73
> Bruce
>
> Now you're trying to define what is and is not QRP again. You're
> definition
> of QRP seems to be a minimalist hardware approach.

Date: Mon, 29 Apr 2002 22:18:53 -0700
From: "Doug Hendricks" <ki6ds@dph.dpol.net>
To: <qrp-l@Lehigh.EDU>
Subject: [125818] BLT Builder Found

Message-ID: <012401c1f006\$88117500\$4a0b0d0a@dph.dpol.net>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Wow, that was quick. Problem solved as I have a volunteer. Love this hobby. 72, Doug

Date: Tue, 30 Apr 2002 13:35:34 -0400
From: John Wagner <john@wagner-usa.net>
To: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>
Subject: [125819] Re: Need volunteer to build BLT for Blind Amateur
Message-ID: <B8F44E25.25D8%john@wagner-usa.net>
Mime-version: 1.0
Content-type: text/plain; charset="US-ASCII"
Content-transfer-encoding: 7bit

I'm curious if there is a need for a pool of builders to help out people who want kit radios but can't build them themselves due to a handicap of some sort.

For that matter, I wonder how much someone might appreciate a scratch built rig.

Is there any organization that can match people up? Surely there must be a need for it. I'm pretty sure Elecraft maintains a list of builders, but I'm guessing there might be a wider need.

Anyone know of such a thing or group? I wouldn't mind putting together a kit or two for someone, especially if they were going to contribute to some radio QSO's on the air!

73,

John, N1Q0

> From: "Doug Hendricks" <ki6ds@dph.dpol.net>
> Reply-To: ki6ds@dph.dpol.net
> Date: Mon, 29 Apr 2002 22:04:25 -0700
> To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
> Subject: Need volunteer to build BLT for Blind Amateur
>
> I need a volunteer. A blind amateur wants one, but can't build because of
> his handicap. So, if there is someone out there who would like to build it

> for him, please contact me. He also wants S0239 connectors instead of BNC,
> but that won't be a problem. Email me if you can help out. Thanks, Doug
>
>

Date: Tue, 30 Apr 2002 13:50:45 -0400
From: "Robin Kidd" <robink@us.ibm.com>
To: qrp-1@Lehigh.EDU
Subject: [125820] Re: Need volunteer to build BLT for Blind Amateur
Message-ID: <0F7DF13482.CB7655F8-0N87256BAB.0061D600@boulder.ibm.com>
MIME-Version: 1.0
Content-type: text/plain; charset=us-ascii

I would really like to get involved with building. I have only built 2 kits but find that I really enjoy it. Also it would give me a great deal of pleasure to know that I had built a kit for someone who has a handicap.

Regards,

Robin J. Kidd
KG4RSQ
Network Engineer
IBM Learning Services

Remember, the Ark was created by inspired amateurs but the Titanic was created by professionals...

Ikg4rsq@arrl.net

Date: Tue, 30 Apr 2002 10:56:45 -0700 (PDT)
From: Jim Cluett <w1pid@yahoo.com>
To: qrp-1@lehigh.edu
Subject: [125821] CW HF in your pocket! A Handie Codie.
Message-ID: <20020430175645.48027.qmail@web11607.mail.yahoo.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

All this talk about clandestine radios got me thinking about a handie codie. In your pocket. We've got all the ingredients. Say an SST in your shirt pocket. For

an antenna a 50 ohm 2 watt resistor soldered in line with a bit of wire. Range... whatever you want. 100 yards - 1000 miles. A little earphone, a paddle clipped to your vest. So three or four guys have these set up at a club meeting. and they're passing clandestine messages during the presentation. What a hoot! What a great way to get people interested in QRP. "Hey what the heck are you doing with that key?" Or at a hamfest. had it with the QRM on VHF? Go to 20 meters with an 8 inch antenna. You could use the NJQRP badger to beacon your call. I'm going to put something together tonight. Too goofy? Jim wlpid@arrl.net

Do You Yahoo!?
Yahoo! Health - your guide to health and wellness
<http://health.yahoo.com>

Date: Tue, 30 Apr 2002 13:31:06 -0500
From: "Tony Parks" <robert.parks11@gte.net>
To: <qrp-l@Lehigh.EDU>
Subject: [125822] free antenna to a good home
Message-ID: <004b01c1f075\$31c4b760\$ce12f143@3dse0>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I recently had to take down my home made wire loop antenna. The antenna is a 400 foot loop of wire with about 45 feet of home made ladder line. The loop and ladder line was made from a 500 foot length of #12 stranded black plastic insulated wire. Ladder line is spaced 1.5 inches with spacers at one foot marks. Included with the antenna are four ceramic insulators and attached 50 to 70 foot lengths of nylon line.

The loop has served me well for about 12 months and I have used on all bands with a balun located next to my K2. I have worked many states and a fair amount of DX at QRP levels with this loop on 80 through 10.

The antenna might be good for a club field day antenna. The recipient would only need to pay the shipping cost - less than \$15 I would guess.

Please e-mail me directly if interested and give me an idea of your intended use.

73,

Tony
KB9YIG

Date: Tue, 30 Apr 2002 21:01:35 +0200
From: DL2FI@t-online.de (Peter Zenker)
To: "'Low Power Amateur Radio Discussion'" <qrp-1@lehigh.edu>
Subject: [125823] RE:DK1HE SMD 40 Kit
Message-ID: <000001c1f079\$76863320\$eb00a8c0@Webnote>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Hi Tim and other interested people.

> Worst part of the whole project is dropping one of the little buggers.
> I looked for one part for an hour > > and it was on the bench all the
time=20
> hiding. If you need help I can help with

>73/72 Tim O'Rourke KG4CHX

That=92s not so worse, only ONE of this little mouse :-))
Within the kits we glued the Parts with tape on a piece of paper, that
helps. But when I was building the prototype, all parts have been in
little boxes, open boxes, of course. I don=92t know if my daughters cat
either loves SMT or hates SMT. Anyway, the beast jumped just between the
boxes like a tiger, spreading away those boxes and those SMT parts all
over the desk. THAT was a sesaster.

Yes, the cat is still alive, thanks for your interest Sir.

Lets be serious again:=20
I use a kitchen tray when working with SMT. (Is that the right name in
English? What I mean is such a tray you use when you transport all the
dishes and pots from kitchen to dinner room)

This is an excellent help when SMT part try to jump from the PCB just in
the moment you try soldering it. The tray cannot stop them jumping, but
they do not jump to the floor, where the dog will eat them, they only
jump into the tray where you can find it.

So, rent a kitchen tray from your wife before soldering SMT!!

A last tip: I said "rent it" that means you have to ask. I forgot to ask and when my woman found the kitchen tray in my shack a week after she missed it first.....

But that=92s another story, may be, I tell it at FDIM in Dayton :-)

73 de Peter,=A0 DL2FI

DV Berlin DARC e.V.

German QRP Group DL-QRP-AG <http://www.dl-qrp-ag.de>

QRPproject QRP and homebrew international <http://www.qrpproject.de>

Date: Tue, 30 Apr 2002 16:04:58 -0400

From: W2AGN <w2agn@w2agn.net>

To: Mike Yetsko <myetsko@insydesw.com> ,

Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>

Subject: [125824] Re: OT Posts in General

Message-ID: <0204301604580J.04101@jsielke>

MIME-version: 1.0

Content-type: text/plain; charset=iso-8859-1

Content-transfer-encoding: 7BIT

On Tuesday 30 April 2002 10:26, Mike Yetsko wrote:

> This is almost as narrow thinking as saying CW on HF is the only method
> for QRP!

>

> Mike

--

Uh, it isn't?

John L Sielke W2AGN

w2agn@w2agn.net

<http://www.w2agn.net>

; -)

Date: Tue, 30 Apr 2002 17:42:46 -0400 (EDT)
From: baltimoremd@baltimoremd.com
To: Kenneth Hoglund <hoglund@wfu.edu>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [125825] Re: OT: WWII Receiving
Message-ID: <20020430173750.S65448-1000000@unix1.vhost.min.net>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Mon, 29 Apr 2002, Kenneth Hoglund wrote:

> It was over a year ago that I asked a question to the list about the
> small near-qrp rigs that spies used during the "Big War," and several
> folks responded off-list with many helpful pieces of information.

I hope that sometime before the folks with personal or family/friends
memories of this type of communications along with shipboard and shore CW
operator pass on, they'd consider writing some of the memories.

They won't be here again...and I'd love to put them on the web. One
gentleman took me up on the offer...you can get a first hand glimpse of
submarine radio operations at

<http://www.zerobeat.net/submarine/index.html>

Thom

baltimoremd@baltimoremd.com
<http://www.baltimoremd.com/>
<http://www.baltimorehon.com/>
<http://www.zerobeat.net>

Thom LaCosta K3HRN Webmaster
Baltimore's Home Page
Home of the Baltimore Lexicon
Home of The QRP Web Ring
and Drake Mail List Pages

Date: Tue, 30 Apr 2002 17:51:43 -0400
From: Paul Womble <pwomble1@tampabay.rr.com>
To: QRP-L <qrp-l@lehigh.edu>
Subject: [125826] CQ Southwest Florida
Message-ID: <3CCF11EF.37377948@tampabay.rr.com>

MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Anyone here live in Charlotte, Sarasota, or Lee counties?

Please contact me off of the list. I need to get some local info.

Thanks!

Paul K4FB

Date: Tue, 30 Apr 2002 18:16:35 -0400
From: "ZOOM" <kandrparker@sympatico.ca>
To: <colcal@srv.net>,
"Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [125827] Re: Apology / WWII Radio Interception
Message-ID: <001801c1f094\$b13a5260\$c791fea9@valveman>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

American History?
Hmmm! I thought WWII meant World War II.

Gee thanks for the correction!

----- Original Message -----
From: "Francis Callahan" <colcal@srv.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Tuesday, April 30, 2002 6:21 AM
Subject: Re: Apology / WWII Radio Interception

> Apologize HELL That was a great period in American History 72 Cal KF7ET
> ----- Original Message -----
> From: "John R Kirby" <n3aaz-qrp@juno.com>
> To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
> Sent: Monday, April 29, 2002 7:53 PM
> Subject: RE: Apology / WWII Radio Interception
>
>
> >
> > Apologize ? ? ?

> > For what ?
> > BULL DURM !!!
> > This is one of the more interesting radio topics . . .
> > Thank you for that post.
> >
> > Maybe "the next generation of the defenders of
> > democracy" should read and head such topiaks . . .
> >
> > The Codebreakers
> >
> > Camp X
> >
> > Bletchley Park
> >
> > Blindmans Bluff
> >
> > John
> > N3AAZ
> > FM 19 xa
> >
> > From: <jfox6@houston.rr.com>
> > To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
> > Date: Sun, 28 Apr 2002 18:48:17 -0500
> > Subject: Re: OT WWII Radio Interception rooms
> >
> > From: Bob Nielsen <nielsen@oz.net>
> > To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
> > Date: Sun, 28 Apr 2002 23:12:24 -0700
> > Subject: Re: OT WW II Radio Interception rooms
> >
> > From: "Stuart Rohre" <rohre@arlut.utexas.edu>
> > To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
> > Date: Mon, 29 Apr 2002 19:01:16 -0500
> > Subject: British receiving site shown on the TV program
> >
> > . . . Thanks for the above posts.
> >
> > John
> > N3AAZ
> > FM 19 xa
> >
> >
> > -----
> > GET INTERNET ACCESS FROM JUNO!
> > Juno offers FREE or PREMIUM Internet access for less!
> > Join Juno today! For your FREE software, visit:
> > <http://dl.www.juno.com/get/web/>.
>
>

Date: Tue, 30 Apr 2002 18:22:01 -0400
From: Dave <wr3i@earthlink.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>,
djfulle@qwest.com
Subject: [125828] Re: [OT] Question on MP3 players
Message-ID: <B09354DA51QKSQPLYX21YUHE51DBS0QP.3ccf1909@sony>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

I will watch this thread closely as I am still trying to get CW practice sound to load and work on my Clei palm MP3 4 I have had no luck yet and think it something to do with conversion methods
RGDS
Dave
WR3I

/30/2002 12:46:08 PM, "David Fuller" <djfulle@qwest.com> wrote:

>Anybody on the list familiar with mp3 players and the process of editing
>and downloading sound files.
>I have a project in mind and have some questions.
>
>Since this is off topic please reply direct
>
>Thanks
>-WD7Z
>
>
>

Date: Tue, 30 Apr 2002 18:28:34 -0400
From: "Marty N5NW" <n5nw@n5nw.org>
To: "Bill Coleman" <aa4lr@arrl.net>, "QRP" <qrp-l@lehigh.edu>
Subject: [125829] RE: Antenna Impedance (was: RE: Mobile whips)
Message-ID: <HJELK0JDNFAJGICJMIFGGEIIDEAA.n5nw@n5nw.org>
MIME-Version: 1.0
Content-Type: text/plain;

charset="us-ascii"
Content-Transfer-Encoding: 7bit

Sorry if my layman's explanation of things were a bit off. I will further banish myself from antenna discussions. I'm an accountant and economist, I deal with game theory and the Nash Equilibrium when I speak of antennas. That is, the point at which efficiency and bandwidth are maximized.

de N5NW/8 (Marty)
Bellbrook, Ohio

Home of Wilbur and Orville's little brother, Mostly, and little sister, Partially.

Date: Tue, 30 Apr 2002 22:37:32 GMT
From: na5n@zianet.com
To: n2cqr@clix.pt
Cc: qrp-l@lehigh.edu
Subject: [125830] Re: Biasing MOSFETS?
Message-ID: <20020430223732.19795.qmail@zianet.com>
Mime-version: 1.0
Content-type: text/plain; charset="us-ascii"

Bill Meara writes:

> I'm using a little amplifier from Ramsey. Two MOSFETS in push-pull.
> Broadband linear RF Amp. I'm using it on 17 meters.

I am not familiar with this specific amplifier, but the principles for using MOSFET's is the same.

> Problem is that it is getting very hot. I've increased the size of the
> heatsink, but it still is getting too hot.

There are two types of MOSFET's: RF mosfet's and switching mosfets. The RF mosfets are \$30-40 each, so seldom seen in amateur work. That leaves the cheaper switching mosfet's, such as the IRF510. These are designed to be a switch ... ON or OFF. In between these two states is a small linear region. This is where most QRP PA's are supposedly designed to operate. In the case of the IRF510, the mosfet "turns on" with a gate voltage around 3.5-4.0v, and goes fully on (called the "full ohmic on region") with around 7-8v on the gate. The exact ON and OFF voltages on the gate will vary tremendously from one IRF510 to the next. When you

build an IRF510 PA, you should characterize that particular mosfet so you know exactly at what gate voltage drain current starts to flow, and if possible, at what gate voltage the drain current becomes maximum, or the point of the full-ohmic-on region.

If you spend too much time in the full-ohmic-on region, you are drawing excessive current not being transformed to output power, which is dissipated across the source-drain junction ... that is, excessive HEATING of the IRF510.

> I'm wondering if there would be any benefit to moving the biasing diode so
> that it would be in physical contact with the heat sink. This worked
> wonders in stabilizing a BJT amp, and in keeping it cooler -- I'm wondering
> if this would also work with MOSFETS.

Per the above, it is more important to characterize the biasing points of your IRF510's. You'll need to monitor BOTH the drain and gate voltages simultaneously with either a DVM and/or an oscscope. With no gate voltage, the IRF510 will be OFF, such that you will have +12V on the drain (or whatever your raw Vcc is).

Connect a 10K or so pot between ground and +12, such that the wiper then will go from 0V to +12v. Connect the wiper to the gate. Initially set it to 0v and record the drain voltage. Say it is +12v.

Now increase the voltage on the gate until the drain voltage begins to drop by the smallest amount you can detect. Usually 100-200mV should be obvious on most DVM's or scopes. Say this happens with the gate voltage at 3.8v. This is the gate turn-ON voltage: 3.8v

Now increase the gate voltage and watch the drain voltage go down ... 10v, 8v, 6v, etc. Be quick at this. You may need to turn the gate voltage to 0v if the IRF510 starts getting too hot doing this before doing it again. What you are looking for is increasing the gate voltage and watching for the point where the drain voltage no longer gets any lower. Say this happens with a gate voltage of 7.8v and a drain voltage of 1v. If you increase the gate voltage to 8v, the drain voltage stays at 1v. You are defining the dynamic range of the LINEAR region. In this case, the linear region is a gate voltage from 3.8v to 7.8v ... producing a drain voltage that varies from +12v down to +1v. Another way to look at it is the mosfet turns ON with a gate voltage of 3.8v (which means it is OFF below 3.8v), and the "switch" (the IRF510) is fully ON with a gate voltage of 7.8v. This is the gate voltage range you MUST operate within! But remember, with the gate voltage at 7.8v, producing a drain voltage of 1v, you are now drawing FULL CURRENT, which for the IRF510 is around 5A! (Assuming your power supply can provide that).

For accuracy, there is one additional test you need to perform. For a

typical 5W QRP PA running class C (50% efficiency), a drain current of about 1A is usually required. In this case, $12V \times 1A = 12W$ input power, yielding an efficiency of $5W/12W = 42\%$ (fairly typical inspite of the amazing efficiency claims made by some). How much current does your rig draw to make 5W? Figure out the efficiency yourself using the above. Subtract the receive current from the transmit current to be a purist.

But this 1A is rms, meaning the IFR510 will be drawing about 1.5A on the peaks ($1A \times 1.414$). So you need to find out at what gate voltage produces a drain current flow of 1.5A. To do this, you must monitor the drain current flow (either in the drain lead, or between the power supply and the rig, providing you subtract out the receive or standby current on key up).

Let's say you parallel some resistors to achieve 1-ohm in the drain lead. This means when you drop 1.5V across this 1-ohm resistor, your drain current is about 1.5A.

Now increase your pot/gate voltage again until you see your 1.5V drop across the 1-ohm resistor, identifying 1.5A of drain current. Say this occurs at 7.4v on the gate. This identifies the true dynamic range you need to operate your IRF510 inside of ... a gate voltage from 3.8V (turn ON) to 7.4v for 1.5A peak of drain current.

HERE'S THE BIGGEST MISTAKE MOST IRF510 CIRCUITS MAKE:

=====

You go keydown for transmit, and adjust the bias for 5W output. When you go keyup, the IRF510 should TURN OFF. But if the bias is set too high, above 3.8v gate turn on in this example, your IRF510 will be drawing current, perhaps several hundred mA of current if you don't check. This, of course, is wasted power and needlessly heating up your IRF510.

IRF510's are SWITCHING MOSFET'S ... there is absolutely NO NEED to set this so-called "idling current" in a mosfet. On keyup, there should be NONE, ZERO, ZIP drain current flowing in the IRF510.

If you set your bias for 5W out, and you still have drain current flowing on key-up, your problem is simple: INSUFFICIENT GATE DRIVE -- not biasing. You do not have enough peak-to-peak RF drive going to the gate. This is the biggest problem I've seen with most published IRF510 circuits ... insufficient gate drive!

Back to our example, the gate turns ON at 3.8v and the drain draws 1.5A at 7.4V. This is 3.6v difference. Your RF drive needs to be AT LEAST twice this! (or 7.2Vpp).

MY RECOMMENDATION with the above example, is to bias the gate around

0.5v below the gate turn on voltage ... or $3.8 - 0.5v = 3.3V$. With no input signal, this will ensure the IRF510 is completely turned off (with the gate turn on voltage of 3.8v). The input RF drive signal should be capacitively coupled, so that with no RF drive, the gate voltage is this 3.3v, and the IRF510 is turned OFF.

For proper class C biasing, your input drive should be twice your gate input biasing range, that is, twice the 3.8v (turn ON) to 7.4v ($I_d=1.5A$), or about 7.2Vpp RF drive at the driver output, feeding the coupling capacitor between the drive and gate input circuit. The first 3.8v will do nothing (except help charge up the gate-source capacitance ... about 150pF). Then when it exceeds the 3.8v bias, the IRF510 will begin to conduct. When the input drive reaches the maximum of 7.2v, this will be the MOMENTARY point of maximum 1.5A drain current, corresponding to about 1A rms drain current.

So to properly bias an IRF510, you need to know at what gate voltage drain current BEGINS to flow, at what gate voltage produces about 1.5A of drain current, and at what gate voltage causes FULL current flow. In most IRF510's, the difference in gate voltage between 1.5A and full drain current is 0.5V or even less. Fairly critical.

The last problem, of course, is if you have too much gate drive, say 8-9V peak. This is because (in our example), once the gate voltage exceeds the 7.4v (1.5A drain current point), much above that, the IRF510 will be drawing it's full 5A of current over some portion of the input sinewave, usually 10-25% of the cycle. This excess power does two bad things:

- 1) It saturates the toroidal core being used in the drain circuit for the RFC or transformer primarily (usually a 1:4 bifilar wound transformer). This inductance can not get rid of all of its stored up current into the output filter before the next drain current cycle begins if it goes into core saturation. A T50-43 core will saturate around 2A peak current.
- 2) The excess current has no place to go except to dissipate in the form of heat across the drain-source junction. This will make the IRF510 VERY, VERY HOT in short order. The kind of heat that removes your finger print!

In this full-drain current (full-ohmic on) condition, another bad thing needs to be pointed out: We know that the approximate output resistance of any PA transistor or mosfet is the famous $R_L = V_{cc}^2 / 2P_o$, which equates to about 14 ohms at 12V and 5W output. When you enter the full ohmic-on region, the output resistance then becomes the R_{ds} of the IRF510, which is about 0.4ohms. Drop nearly 12V at 5A across a 0.4 ohm resistor, and buddy -- you're making some major heat. ($P=EI = 12V \times 5A = 60Watts!$). The maximum power dissipation of an IRF510 is about 40W. Ooops ... something has got to give. Poof - there goes your IRF510 after about

5 seconds of keydown.

So, for each IRF510 you build a PA out of, characterize the gate voltage required for gate turn on, 1.5A of drain current, and where it goes into it's full ohmic-on region (full drain current flow). This defines your effective dynamic range of RF drive, and the safe operating area you should remain within.

If you built an IRF510 from somebody's article that says to set 50mA or so of idle current on key-up, immediately drop the gate bias a bit until NO DRAIN CURRENT flows. And if you can't get 5W out at this point, then increase your RF drive. Or, if it's getting too hot, then check that you don't have too much drive, drawing more than 1A rms, or that the gate is not exceeding 8V (or whatever you measured) on the peaks.

MOSFET PA's make neat amplifiers, but due to the large variations from one device to the next, they are not as reliable to build as a BJT PA using a 2SC2078 or something. This is why each IRF510 should be characterized before building the PA to establish the proper bias point.

> What do you say? Would this be a cool move or what?

By setting the PROPER BIAS POINT AND RF DRIVE, you shouldn't have to piddle around with diode temperature compensation or bias feedback networks to make the IRF510 work properly.

It's OK for the IRF510 to get fairly hot after 5-10 seconds of keydown with a class C 5W PA, but if you're leaving finger prints ... then it's way too hot and it is not properly biased or driven.

72, Paul NA5N

Date: Tue, 30 Apr 2002 18:56:31 -0400
From: wkhibbert@juno.com
To: w6toy@erols.com, qrp-1@lehigh.edu
Subject: [125831] Computers in Ham Radio
Message-ID: <20020430.185633.-422759.4.wkhibbert@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hi Bruce. Keith here in the Depths of the Great Bergen Swamp

For most hams your point in valid, but for an increasing number it is the ONLY way that they can participate at any level above 2 M FM.

In the Rochester, NY area we have 10 hams that are visually-impaired, some just at the "legally-blind" level, but most are totally blind.

They all use a computer in one way, shape or form to operate. This could be a logging program with the screen set on MachoContrast and HUGE letters or the full speech package with radio controls, logging and whatever.

I have either built or helped in the construction of a computer for 4 of the 10+ and have assisted in acquiring adaptive software/technology for others.

I am not alone in assisting these hams to get on the air, in fact one of the aforementioned group works as a Programmer/Instructor for Adaptive Technology at the Association for the Blind & Visually Impaired (ABVI).

If you run into K2LKK on 30 Meters you will be working one of these computer-assisted hams, and it doesn't affect his CW at all, but his guide dog does! She does not like the sound of CW emanating from the speaker!

73, Wm. Keith Hibbert, WB2VUO, TC/WNY ARRL Section
President, Brockport Amateur Radio Klub
"My night light runs more power than my Rig!!!"
<mailto:wb2vuo@arrl.net>

GET INTERNET ACCESS FROM JUNO!

Juno offers FREE or PREMIUM Internet access for less!
Join Juno today! For your FREE software, visit:
<http://dl.www.juno.com/get/web/>.

End of QRP-L Digest 2541

